Code No.: EC731PE | R20 | H.T.No. | | | 8 | R | | | | | |

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
IV–B.TECH–I–Semester End Examinations (Supply) - April- 2024
WIRELESS COMMUNICATIONS AND NETWORKS
(ECE)

[Time: 3 Hours] **[Max. Marks: 70]**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 20 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A **(20 Marks)**

1. a)	Define Co-channel Interference.	[2M]
b)	What is intersystem handoff?	[2M]
c)	Write about Site specific modelling.	[2M]
d)	Define Brewster angle.	[2M]
e)	What are the Time Dispersion Parameters of Multipath channels?	[2M]
f)	Write the effects of Doppler spread in Mobile Radio Propagation.	[2M]
g)	Explain about frequency diversity.	[2M]
h)	Discuss about Zero forcing algorithm.	[2M]
i)	What are the advantages of Wireless Local Area Networks?	[2M]
j)	Write about hiper LAN WLL.	[2M]

PART-B **(50 Marks)**

2.	Explain various Handoff processes available in a Wireless communication model.	[10M]
	OR	
3.a)	Discuss the need for improving Coverage and Capacity in cellular system.	[5M]
b)	Explain about Sectoring.	[5M]
4.	What are the Three Basic-propagation mechanisms in Mobile communication systems? Explain in detail.	[10M]
	OR	
5.	List the different outdoor propagation models and explain Longley-Ryce model.	[10M]
6.	Derive the Impulse response of a Multipath channel.	[10M]
	OR	
7.	Discuss in detail about the factors that influence small-scale fading.	[10M]
8.	Differentiate between Linear equalizers and Non-linear equalizers.	[10M]
	OR	
9.	Explain about	
a)	Least Mean Square (LMS) Algorithm	[5M]
b)	Recursive Least Square Algorithm	[5M]
10.	Write the enhancements in IEEE 802.11 Protocol and discuss the improvements in IEEE 802.11 a and b standards.	[10M]
	OR	
11.	Give the brief differentiation between IEEE 802.11 a,b,g, and n protocols.	[10M]

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